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U. S. DEPARTMENT OF AGRICULTURE U. S. DEPARTMENT OF AGRICULTURE
Production and Marketing Administration
Washington 25, D. C.

February 25, 1946

DRIED AND FROZEN EGG MEMORANDUM NO. 12

To: Regional, State and Resident Supervisors and Samplers

From: B. W. Kempers, Senior Marketing Specialist, Dairy and Poultry
Grading and Inspection Division

Subject: Basic Instructions Regarding Procedures and Methods of Operation

- I. These Instructions supersede Memorandum No. 11 and its supplements. They cover mainly methods of operation and how to prepare reports. In addition to this memorandum each resident supervisor must be thoroughly familiar with the Minimum Requirements for Facilities, Operating Procedures, and Sanitation, and with appropriate announcements and keep copies of each handy for continuous reference.
- II. Time - temperature - sanitation - selection of raw material are the factors which must be watched.
1. Shell eggs must be precooled (see page 13, Sec. V, sub 2, Requirements for Facilities, Operating Procedures and Sanitation).
 2. Shell eggs must be candled (see page 9, Sec. 3, sub 3, Requirements for Facilities, etc.).
 3. All dirty eggs must be washed and recandled (see page 10, Sec. III, sub 3, Requirements for Facilities, etc.). Dirty eggs are defined to include all eggs which fall into the U. S. Dirty Classification--stain and internal quality factors excepted.
 4. Sanitation in breaking room must be maintained (see pages 10, 11, 12 and 13, Sec. IV, Requirements for Facilities, etc.).
 5. Each cup of egg meat shall be carefully examined for appearance and odor before emptying (see page 11, sec. IV, sub 8, Requirements for Facilities, etc.).
 6. Inedible shell and liquid eggs must be denatured (see page 11, Sec. IV, sub 14 and page 9, Sec. III, sub 6, Requirements for Facilities, etc.).
 7. Packaged liquid eggs must be frozen within 72 hours (see page 14, Sec. VI, sub 2, Requirements for Facilities, etc.).

8. Liquid eggs must be cooled to 45°F or 40°F within 60 minutes (see page 14, Sec. V, sub 3 and 4, Requirements for Facilities, etc.).
9. Powder must be cooled to 85° F before packaging and within 1 hour (see page 17, Sec. VII, sub 8, Requirements for Facilities, etc.).

III. General Duties of Resident Supervisors. The resident supervisors are responsible for observing the class and quality of raw material; operating practices; compliance with contract provisions; selection, preparation and shipping of official samples; testing weights, and reporting failure of contractors to comply with standards for operations and the provisions of pertinent purchase announcements. These general duties include, but are not limited to the following:

1. Check the proper selection of raw material, shell, liquid, and frozen eggs. When frozen eggs are used, identify all lots as having been produced under U. S. D. A. supervision. No container of frozen eggs may be dried which is not properly identified and covered by a report. The frozen egg production reports covering eggs dried when applicable shall be cancelled by marking across the face "dried (date of drying)."
2. Check the disposition of no grade and inedible product which shall include the following:
 - a. Inedible shell and liquid eggs must be denatured and removed from the premises daily. (See page 9, Sec. III, sub 6; Requirements for Facilities, etc.).
 - b. Eggshells shall be removed from the breaking room at regular intervals or continuously.
 - c. Inedible liquid shall be placed in an identified container, containing a denaturant. (See page 11, Sec. IV, sub 14, Requirements for Facilities, etc.).
 - d. Substandard edible liquid, meaning liquid produced from dirty chex leakers, dux eggs, unwashed dirties, Irish sucker liquid, or etc. shall be properly identified by the firm. (See page 14, Sec. VII, sub 5, Requirements for Facilities, etc.).
 - e. Below grade powder which includes screenings, badly burnt and dirty powder, and any other powder which is obviously below grade shall be placed under seal at the end of each day's production and a record kept of seals used.

When below grade powder, including powder rejected by the laboratory as being below acceptable, is sold, fed to livestock or otherwise disposed of, a report of the manner of disposition, including name of buyer must be sent to your immediate supervisor (see page 18, Sec. XV, Requirements for Facilities, etc., and the Purchase Announcement), who will forward same to the Washington office.
 - f. No duck, geese, guinea, turkey eggs shall be used. (See page 9, Sec. III, sub 4, Requirements for Facilities, etc.).

3. Examine three per cent (but not to exceed 30 containers) of each day's frozen egg pack (at the end of 72 hours) by drilling to determine whether eggs were frozen without souring and whether eggs are musty, moldy, etc. You are not permitted to issue DA 200 (formerly FDA 497) until this examination is completed.
4. Observe and report the adequacy and rapidity of uniform blending of collector powder. (See page 16, Sec. VII, sub 5, Requirements for Facilities, etc.).
5. Check the containers for contract specifications and container liners (whenever new supplies are received) as to meeting specifications (submit to laboratory if in question) and to see that they are properly placed in barrels and sealed.
6. Keep stamps, report forms, seals, and samples under lock when not in use.
7. Check the bracing on each car or truckload of dried eggs shipped. If car is not loaded properly, notify your immediate supervisor by mail.
8. Record on daily report, DA 203 (formerly OMS 197), and on sampling report, FDA 200, all departures or deviations from the "provisions of the contract (including package identifications) or the "minimum requirements for operating procedures and sanitation" in the following manner:
 - a. Any noncompliance shall be reported by USDA lots on FDA 200.
 - b. When temperatures recorded on DA 203 show a range for a lot, report only the average temperature (one figure) for the lot on FDA 200. If the average temperature is satisfactory, you should consider the lot satisfactory.
 - c. When noncompliance is in the segregation of eggs in the candling or breaking room, or refers to sanitation in any part of the plant, report (on FDA 200) a violation only when the condition is not promptly corrected after presenting the facts to plant manager or person designated by him.
 - d. When conditions are serious or noncompliance continues, call your State Supervisor immediately. Do not issue form FDA 200 or form DA 200 under such circumstances unless your State Supervisor instructs you to do so.

When you do not issue either form FDA 200 or form DA 200, do not permit the containers to be identified with an official stamp or legend; or if packages have been so identified, remove stamps or legends or have them removed under your immediate supervision from all packages carrying such identification. Place a notation on your daily log sheets, form DA 203, stating the reason for your refusal to permit packages to be identified, the number of packages from which the official stamp or legend was removed and the date and time of day when such removal was completed.

- IV. Area, State, and Resident Supervisors may not deviate from these instructions or the sanitary standards without approval from the Chief, Dairy and Poultry Grading and Inspection Division.

Questions arising on plant equipment, operating practices not covered by the Minimum Requirements, or contract provisions are to be submitted in writing either to immediate supervisor, regional supervisor or to the Washington office, in the order named, for ruling prior to giving advice or information to plant management.

V. TEST WEIGHING PROCEDURE

A. Checking tare weights dried egg containers.

1. Resident Dried Egg Supervisors shall tare weigh each empty barrel or 100-pound box before it is filled. Barrels or boxes shall be complete with heads or tops. When the package is filled, the same barrel head or box top should be used to close the package. A complete set of barrel or box liners shall be included with each package tare weighed. Tare weights shall be marked on each package by resident sampler.

Tare weights shall be determined in $1/8$ pounds or $1/4$ pounds in accordance with graduations of scale used.

If tare weight is an even $1/8$ or $1/4$ pound, tare weight shall be listed according to scale reading. If tare weight is between scale graduations, the tare shall be listed at the next higher graduation.

2. Tare weights on 56-pound containers shall be obtained by weighing 20 sets of 56-pound containers, each set shall include:

1-56# container
4-14# containers and liners
Metal strapping required to complete package

If tare weights are determined daily, only 10 sets need be weighed each day.

Use back of file copy of FDA 200 for worksheet.

Total weight shall be averaged and tare weight set as follows:

If tare weight averages to an even ounce, the tare would be set at the average thus determined.

If tare weight averages to a fraction of an ounce, the tare would be set at the next higher ounce.

3. Tin containers shall be checked as A 2 above.

B. Checking Gross Weights Dried Egg Containers

1. Not less than 5% of the number of packages in the lot are to be weighed to determine gross weight.

If packages from which samples are to be drawn are to be checked for gross weight, such packages shall be weighed prior to the time samples are taken.

2. Gross weights shall be determined in $1/8$ pounds or $1/4$ pounds in accordance with graduations on scale used. If gross weight is not an even $1/4$ or $1/8$ pound, gross weight shall be listed at the next lower graduation.
3. When 56-pound containers are weighed on scales graduated in ounces, gross weights may be listed in ounces. Each 56-pound container test weighed shall be individually weighed to determine gross weight. In addition, individual 14-pound units should be weighed individually. Individual 14-pound unit test weight need not be recorded on FDA 200.

C. Determining Net Weights and Contract Weights

1. The net weight of each package shall be determined by subtracting the tare weight from the gross weight. Gross, tare, and average test net weight shall be listed on the Sampling and Test Weight Report (Form FDA 200) for each package weighed.
2. Average test net weight shall be determined by totaling the net weight of each package test weighed in the lot and dividing the sum by the number of packages weighed. Average test net weight are to be computed to the second decimal point; for example, 175.37 pounds.
3. The contract weight is to be determined by either of the following methods
 - a. When the average test net weight is equal to or greater than the marked net weight, the contract weight shall be computed by multiplying the marked weight by the number of packages in the lot.
 - b. When the average test net weight is less than the marked weight, the contract weight shall be computed by multiplying the average test net weight by the number of packages in the lot. Contract weights are to be computed to the second decimal point; for example, 3997.73.

D. Checking Net Weight Frozen Eggs When Products Packaged

See Instructions to Egg Products Inspectors - Frozen

VI. IDENTIFICATION OF PRODUCT

A. Dried Eggs

1. Resident dried egg supervisors shall examine the packages to see that all markings required by the appropriate purchase announcement have been placed on the packages and that packages meet contract specifications.

If the product has been sold to CCC, the contract number assigned by CCC must be on each package. If the product has not been sold to CCC but is to be offered for sale, samples may be taken providing all other markings required by the purchase announcement shall have been placed on the package prior to sampling (whether sold to CCC or commercial concern).

2. At the time of sampling a USDA lot number shall be assigned to the lot to be sampled and all packages in the lot shall be legibly stamped with such USDA lot number. This stamp shall be placed near the plant lot number. The packages from which the samples were drawn shall be stamped thrice with the USDA lot number to identify them as sampled packages. Two stamps are to be placed on the side and one on the top of the package.

3. The USDA lot assigned shall consist of approximately 8,000 pounds of powder, produced consecutively.

4. Seal liners of 100-pound boxes and barrels with USDA seal.

5. Identification of laboratory samples by serial number:

Each sample prepared for the laboratory shall be identified by a serial number assigned at the time the sample is drawn. Serial numbers listed on each sampling and test weight report shall begin with No. 1 and shall run consecutively to include all samples on a single report.

B. Frozen Eggs

See Instructions to Egg Products Inspectors - Frozen

VII. SAMPLING PROCEDURE

A. Dried Eggs - Chemical and Microbiological

1. Preparation of sampling equipment

- a. Sterilize trier and long-handled spoon in the same manner as breaking room equipment.

(1) Allow trier and spoon to dry thoroughly. Do not use towels to wipe trier.

- (2) Keep trier and spoon in or on dried egg powder when not in use. Trier and spoon shall not come in contact with clothes, container liners, or anything other than powder.
- b. Sampler must wash hands immediately prior to drawing samples.
- c. Bags shall not be opened until sample is ready to be drawn.
- d. When bags are opened, they shall be opened with the aid of the sterilized spoon. Sampler shall not insert hands into the bag.

2. Original Sampling

- a. Sampler shall personally select the bulk packages after manufacturing from which samples are to be drawn. No established routine should be followed.
- b. One sample shall be submitted for each USDA lot (8000 pounds powder produced consecutively).
- c. Sample shall be drawn from 8 bulk packages (barrels, 100-pound boxes, 56-pound packages, or tin containers) in each USDA lot.
- d. No part of the composite sample may be drawn until the entire lot is manufactured--exception when only part lot is required to complete a contract.
- e. Powder must be placed directly into sampling bag.
- f. Powder must be thoroughly mixed prior to sealing sampling bag.
- g. Approximately $3/4$ pound of powder shall be submitted for each USDA lot.
- h. After mixing powder, it shall be packed lightly and sealed immediately so as to exclude all surplus air.
- i. Bags shall be sealed by folding top (confectioners style fold) and sealed with sealing tape across which the sampler shall stamp the USDA lot number which has been assigned to the lot sampled, and across which he shall affix his signature in ink or indelible pencil so that his signature is partly on the sealing tape and partly on the sample bag.
- j. The name of the product, the date sampled, USDA lot number, the sample, serial number, CCC contract number, and sampler's name shall be placed on the sample bag.
- k. Samples shall be kept under lock and key and shall not be accessible to any person other than the sampler.
- l. Sealed samples shall be packaged for shipment by the sampler personally. Official samples should be shipped in boxes, not merely wrapped with paper. Samples should be delivered to the express company or their representatives by the sampler. Shipment must be made prepaid, the charges being paid by the contractor. Shipping container shall be addressed to:

Dr. O. J. Kahlenberg
Production and Marketing Administration
Room 1615, Mallers Building
5 South Wabash Avenue
Chicago 3, Illinois

- m. If more than one sampler or grader is doing the work of sampling and weighing, each person shall sign his or her name in ink or indelible pencil on that portion completed by him.

- n. Show imprint of USDA stamp used to identify products on FDA 200.
- o. Do not send in special letters pertaining to samples. All information transmitted by samplers shall be transmitted on FDA 200 except as in p.
- p. It is permissible to enclose a letter or other means of identification with special or experimental samples.

3. Amendments

- a. All amendments to sampling and weighing reports must be made by either state or regional supervisors. Resident supervisors in the plants are to present the necessary changes, together with reasons for changes, to the state supervisor who, in turn, will review the condition and, if he deems it advisable, will request that an amendment be made by the laboratory. The laboratory will not honor a requested change except as cleared through state supervisors or regional supervisors.

4. Special Sampling

- a. When samples are to be drawn from each individual package, special instructions will be provided by the regional supervisor, state supervisor, or by the laboratory.

5. When resampling is necessary

- a. Samples shall be drawn from the same containers originally sampled.
- b. In addition to a. above, draw an equal number from containers not previously sampled.
- c. Resampling requests will be directed by the vendors to the laboratory and the laboratory in turn will advise the sampler through the regional or state supervisor. The resident sampler shall not honor a resampling request received direct from the vendor.

B. Drawing Frozen Egg Samples (Chemical)

See Instructions to Egg Products Inspectors - Frozen

VIII. PREPARATION OF REPORTS AND RECORDS

A. Resident Supervisor's Daily Report of Plant Operations (Form DA 203)

1. Information shall be shown on all items pertaining to the plant wherein the supervisor is stationed. This report is the basis for deviation comments which are reported on FDA 200 or DA 203. Request applicant to initial report each day.
2. Items 1 to 7 inclusive shall be marked "Satisfactory" or "Unsatisfactory" in the manner shown at top of report. WHEN ONE OR MORE ITEMS ARE SHOWN AS "UNSATISFACTORY" THE SUPERVISOR SHALL PROVIDE A DETAILED EXPLANATION OF THE UNSATISFACTORY CONDITION ON THE REVERSE SIDE OF THIS REPORT TOGETHER WITH THE CORRECTIVE MEASURES TAKEN, OR WITH A STATEMENT AS TO THE MEANS TO BE TAKEN TO CORRECT THE UNSATISFACTORY CONDITIONS.
3. Report on effectiveness of egg candling shall be based on observations made not less than four times daily. Each time not less than 100 eggs, taken from two or more candlers, shall be examined. The number of inedible eggs, number of leakers and dirty chex, and the number of dirty eggs shall be reported per each 100 eggs examined. Candlers' identification shall be given when possible.
4. Temperatures shall be taken not less than 4 times daily during the time the supervisor is on duty.
 - a. In egg drying plants temperatures shall be taken and reported on each of the following operating processes:
 - (1) Egg liquid at time of breaking (to be taken from liquid egg buckets.
 - (2) Egg liquid 60 minutes after time of breaking (to be taken from breaking room or holding room vat).
 - (3) Egg liquid 8 hours after breaking (to be taken from holding room vat).
 - (4) Egg liquid coming from pre-heater in plants where a pre-heater is in use must be not less than 135°F.
 - (5) Egg powder 1 hour after being unloaded from dryer, if tray cooled, or when removed from sifter if cooled by other means. The thermometer shall be inserted 3 different places in the package and read after the third insertion, or when two consecutive readings are the same.
 - (6) Tempering room wherein frozen eggs are placed for partial defrosting. (Length of time frozen eggs remain in tempering room shall be reported).
 - (7) When liquid eggs are delivered to a drying plant not on the premises where broken, temperatures shall be recorded of liquid eggs at the time they are delivered to the drying plant. (Egg liquid is required to be cooled and held at 40 F or below, if to be held more than 8 hours after breaking).
 - (8) Dried egg holding room.

b. In egg breaking plants temperatures shall be taken and reported on each of the following operating processes:

- (1) Egg liquid at time of breaking (to be taken from liquid egg buckets).
- (2) Egg liquid at time it is drawn from churn or 60 minutes after breaking.
- (3) Temperature of egg freezing room (last temperature recorded each day to be taken when final packages of liquid eggs have been placed in freezer; first temperature recorded each day to be taken prior to placing any freshly broken liquid eggs in freezer).
- (4) When liquid eggs are not packaged, dried, or frozen on the premises where broken, temperatures shall be recorded of egg liquid at time of shipment. (Egg liquid is required to be cooled to 40° F. or below if it is to be held for more than 8 hours after breaking.)
- (5) When liquid eggs are delivered to a packaging plant not on the premises where broken, temperatures shall be recorded of egg liquid at time of truck arrival, and also when packaging is completed.

Note: Freezer temperatures shall be recorded as provided in (3).

5. In plants where liquid eggs are frozen, whether frozen on or off the premises, 3 per cent of the packages (but not to exceed 30 containers) of each day's frozen egg pack which have been in the freezer for 72 hours shall be examined by drilling to determine condition.
6. Three copies of "Resident Samplers or Resident Supervisors Daily Report of Plant Operations," DA 203, are to be prepared and distributed as follows:
 - a. Original to Regional Supervisor (semimonthly).
 - b. One copy to State Supervisor (daily).
 - c. One copy for own file.

An additional copy may be prepared for the contractor on request.

B. Sampling and Test Weight Report of Dried Eggs (Form FDA 200)

1. Sampling reports shall be prepared legibly, preferably by typewriter. If a typewriter is not available, sampling reports should be PRINTED, not prepared in longhand.
2. All pertinent information at top of page must be given.

- a. If contract number is not shown, insert words "To be sold" in space provided for contract number.
 - b. If samples are drawn over a period of several days, show date on which sampling was started and also date of completion.
 - c. Sign original and all copies of sampling report in ink.
 - d. If more than one page is necessary, assign a page number and place same in upper right hand corner above contract number as follows, "Page 1."
3. Be sure all information as to lot number, number of packages, weights, etc., is correct. Check finished sampling report with working memorandum to eliminate errors.
 4. Show totals for number of packages listed on sampling report, number of samples drawn and submitted and contract weight.
 5. Double check all additions and multiplication to avoid errors.
 6. Stamp USDA lot number used to identify lots listed on all copies of sampling report.
 7. Include a statement of any unusual conditions found in the plant during the time the product sampled was made.
 8. State the purchase announcement number under which the product has been sold, or is to be offered.
 9. Distribute copies of sampling report as follows:
 - a. Original, in an envelope, to be enclosed in package with samples to laboratory.
 - b. Mail first carbon copy to immediate supervisor.
 - c. Mail second carbon copy to laboratory where covering grading and weight certificates will be typed.
 - d. Hand third carbon to contractor.
 - e. Place fourth carbon copy with working memorandum and place in own file. (Working memorandum should show the package number of each package from which part of the sample was drawn.)

C. FDA 188

1. In plants producing dried eggs, prepare FDA 188 as follows:
 - a. List each day's dried egg production as recorded on DA 203; this shall include all product whether sold to CCC or private account.
 - b. List amount of no-grade powder
 - c. Total the column, listing number of pounds.
 - d. Multiply total by 3.7 to determine pounds of liquid dried.
 - e. Show administrative fee and sign (see application for service). An original and 2 copies of FDA 188 must be prepared for each calendar month's work.
 - f. Retain one copy to which attach your file copies of FDA-200 & DA 203.
 - g. Original and one copy shall be sent to your immediate supervisor on the 3rd day of the following month.

2. In plants which pack eggs for freezing and also dry:

Prepare FDA 188 as in 1 above, except that pounds of liquid frozen shall be added to item 1 d. and the administrative fee determined from the combined amount. Show the administrative fee on one FDA 188 only and note on the other copy that it is reported.

- IX. All resident supervisors shall wear uniforms when on duty. You cannot expect a plant and its operators to be any cleaner or more sanitary than your uniform or your operations.
- X. The state supervisor shall prepare an FDA 746 in quadruplicate on the 16th and end of the month covering each plant that has deviated from the Minimum Requirements for Facilities, Operating Procedures and Sanitation. Particular attention should be given to remarks. The original of this report is to be initialed by the plant management. Two copies are to be sent to the Washington office and one copy to the regional supervisor.

AMENDMENT 1

Drill Salted Yolks and Freezing "Off the Premises"

Under separate cover you have been sent a supply of Dried and Frozen Egg Memorandum No. 12. This memorandum differs from No. 11 in numerous respects. It is essential that each supervisor and sampler study this memorandum carefully so that the instructions will be carried out in detail.

The drilling of frozen eggs at the end of 72 hours is based on whole eggs. You are also required to drill yolks and whites without salt or sugar added. It will not be necessary to drill salted and sugared yolks. However, the freezer temperatures and spacing of the liquid eggs in the freezer must be watched.

In instances where product is packaged on the premises but freezers are not on the premises, it is suggested that the product be checked for adequacy of freezing by a member of the field office staff. Since this checkup is part of the resident supervisory service rendered under DPB 72, it will be necessary to bill for this work on the basis of time. This charge should be kept as low as possible.

The inspector that examines the product for adequacy of freeze shall add the following statement to DA 200 covering the particular lot under Remarks:

"(Number) cans drilled on _____ (date) _____, 1946
and found to be frozen

(Signed) _____
Inspector

Your attention is particularly called to the requirement that a test weight must be made on each day's frozen egg pack. State Supervisors shall assist in making test weights of dried and frozen eggs on each supervisory visit.

AMENDMENT 2

Record of Amount of Eggs Processed in Drying Plants and
Barrel Packaging of Dried Eggs

- A. Effective as of the date of this memorandum the resident samplers at egg drying plants shall record on DA 203 the following information:
1. Number of cases of shell eggs processed for drying.
 2. Number of inedible shell eggs denatured.
 3. Number of pounds of inedible liquid eggs denatured.
 4. Number of pounds of substandard frozen eggs produced.
 5. Number of pounds acceptable dried eggs produced from eggs reported in item 1.
 6. Number of pounds no grade dried eggs placed under seal.

This information will be used by the Audit Division of Procurement and Price Support Branch in determining dried egg costs, and shall be as nearly correct as possible. It will also serve as the basis for preparing your FDA 188's. State supervisors shall return all DA 203's for completion whenever the above requested information is not recorded.

- B. The following is a memorandum received from the Procurement and Price Support Branch. Please be guided by the memorandum when examining barrels for meeting specifications:

"Answering your memorandum of February 8, there have been no formal designations made of authorized cooperate concerns so that no list of such coopers exists. However, each dried egg manufacturer must satisfy himself that reconditioned barrels are as good as new, and that barrels come from an established cooperage concern - not a second-hand dealer or repair man. In any event, the resident sampler has the responsibility of rejecting barrels which in his opinion do not meet contract requirements in all respects.

AMENDMENT 3

Cleating of Barrels

Effective March 1 each sampler stationed at plants in which product is packaged in barrels shall indicate on FDA 200 whether cleats are or are not attached to barrels. Laboratory will not issue certificate unless this information is furnished.

